

Claims

1. A plasma wire burner for plasma spray having at least two burner tubes (3) for supplying electrodes which are in the form of wires (5) and are passed through the burner tube (3) in the direction of the surface of an object to be coated via a feed device (7) which has numerous guiding and/or sliding elements (8) which are mounted such that they can rotate, characterized

in that the feed device (7) which has guiding and/or sliding elements (8) and by means of which the wire (5) is deformed in the elastic or plastic range is integrated in the burner tube (3) or is held in it, and in that the sliding elements (8) are in the form of rollers or rollers having ball bearings.

2. The plasma wire burner as claimed in claim 1, characterized

in that the burner or the supply tube (1) is formed from three components which can be joined together, and the feed device (7) together with its sliding elements (8) is integrated in the burner (1) in the area of at least one intersection plane of two parts which can be joined together.

3. The plasma wire burner as claimed in claim 1, characterized

in that the burner or the supply tube (1) has an approximately circular cross section when viewed from the front, and the central section of the burner or of the supply tube (1) is approximately wedge-shaped when viewed from the front.

4. The plasma wire burner as claimed in claim 1, characterized

in that two feed apparatuses (7) are provided and one feed apparatus (7) is in each case arranged in the area of in each case one intersection point of the burner and of the supply tube (1), with a cathode wire being guided via the first feed apparatus, and an anode wire being guided via the other feed apparatus.

5. The plasma wire burner as claimed in claim 1, characterized

in that the deflection device (7) has numerous deflection rollers (8) which are arranged one behind the other at a distance from one another and interact with at least one deflection roller (9) whose diameter is the same or larger, which, together with the numerous deflection rollers for holding the wire (5), form a guide path.

6. The plasma wire burner as claimed in claims 1 to 4, characterized

in that the larger deflection roller (9) is arranged with its external circumference at a distance (4) from the numerous opposite deflection rollers (8) which are arranged one behind the other, with the distance (4) between the larger deflection roller (9) and the numerous deflection rollers (8) which are arranged one behind the other and interact with it being approximately of the same size as or larger than the diameter of the wire (5).

7. The plasma wire burner as claimed in one of the preceding claims, characterized

in that each deflection roller (8) is arranged at the same distance (4) from the external circumference of the opposite

larger deflection roller (9).

8. The plasma wire burner as claimed in one of the preceding claims,

characterized

in that the wire is guided via a deflection device (7) which has numerous guiding and/or sliding elements (8) which are mounted such that they can rotate, by means of which deflection device (7) the wire (5) is deformed in the elastic or plastic range, with the deflection device (7) having numerous deflection rollers (8) which are arranged one behind the other and are mounted in ball bearings, and having at least one deflection roller (9) which has a larger diameter, is likewise mounted in a ball bearing and is arranged with its external circumference at a distance (4) from the numerous deflection rollers (8) which are arranged one behind the other, with the distance (4) being approximately the same as or larger than the diameter of the wire (5).

9. The plasma wire burner as claimed in one of the preceding claims,

characterized

in that the deflection rollers (8, 9) have a guide groove (14) which is arranged concentrically with respect to the axis (10, 11), for guiding the wire (4).

10. The plasma wire burner as claimed in one of the preceding claims,

characterized

in that the shafts (10, 11) of the deflection rollers (8, 9) are held in two segments or plates (12, 13) which are arranged at a distance from one another and between which the deflection

rollers are arranged such that they can rotate.

11. The plasma wire burner as claimed in one of the preceding claims,

characterized

in that a sliding contact (15) is provided in front of and/or behind the deflection rollers (8, 9) and is pressed against the surface of the wire (4) by means of a spring (16).

12. The plasma wire burner as claimed in one of the preceding claims,

characterized

in that numerous deflection rollers (8) which are arranged one behind the other are provided in a first row and in a second row at a distance (4) from it, in order to guide the wire (4).

13. The plasma wire burner as claimed in one of the preceding claims,

characterized

in that at least three sliding elements or deflection rollers (8) are provided, two of which are arranged one behind the other.